

**A STUDY OF STANDBY WATER FEES/USER FEES
FOR FIRE SPRINKLER SYSTEM CONNECTIONS TO WATER MAINS**

EXECUTIVE LEADERSHIP

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ABSTRACT

Standby water fees/user fees for fire sprinkler system connections to water mains, levied by water utility agencies, were being challenged as excessive and unwarranted by fire protection organizations. Most water utility agencies claimed a right to charge standby water fees/user fees and believed they were reasonable and justified. The purpose of the research was to identify and evaluate the issues on both sides of the debate and to formulate recommendations. Historical and descriptive research methodology was used to answer these questions:

1. Which states have proposed or enacted legislation or rules regulating standby water fees/user fees?
2. What is a reasonable standby water fee/user fee?
3. What services do water utility agencies provide to justify their standby water fees/user fees?
4. What alternatives are available to water utility agencies that depend on the revenue generated by standby water fees/user fees?

Published literature was reviewed, including detailed accounts of legislative action in Florida and complaint proceedings before the Maine Public Utilities Commission. Two separate survey instruments were prepared. Survey questionnaires were received from state fire marshals in all 50 states. Survey questionnaires were received from 43 water utility directors from Broward County, Florida, and Palm Beach County, Florida.

The "State Fire Marshal Survey" revealed that legislation and legal challenges regulating or prohibiting standby water fees/user fees had been initiated in six states: California, Florida, Louisiana, Maine, New Jersey, and Wisconsin. The "Water Utility Director Survey" found that 53.3 percent of the water utility agencies in the 2-county area charged standby water fees/user fees. The fee schedules ranged from zero dollars for 20 water utility agencies to \$10,283 annually for a 12-inch connection in Jupiter, Florida. The total annual revenue for the 2 counties was \$1,785,201. If all or part of this revenue was lost due to a change in state laws a majority of water utility directors favored shifting the cost burden to all customers. The 23 water utility directors that charged fees also indicated the services provided to justify their fees.

A distinction was made between "standby water fees" and "user fees" for water service. The study found that "user fees" for "administrative costs," "mapping of connections and street valves," "annual inspection and maintenance of street valves," and "contingency funding for eventual replacement of pipe" were reasonable and justified. The study found that "standby water fees" that include "estimate for water

that could be used during a fire" and "charges to maintain fire flow capability" were unreasonable and unfair.

The study recommended support for reasonable "user fees" for water service and recommended the elimination of unreasonable "standby water fees." Boca Raton Utility Services was encouraged to eliminate "charges to maintain fire flow capability" from their fee structure. Water utility agencies in Broward County and Palm Beach County were encouraged to use the statistics in the study as benchmarks to evaluate their own rates. The study also recommended that fire service agencies and water utility agencies open lines of communications to assure the cost of maintaining fire sprinkler systems is fair and reasonable.

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INTRODUCTION

Standby water fees/user fees for fire sprinkler system connections to water mains, levied by water utility agencies, are being challenged as excessive and unwarranted by fire protection organizations. Most water utility agencies claim a right to charge standby water fees/user fees and believe they are reasonable and justified. Some fire service agencies, fearing they will have to make up the revenue lost by the water utility agencies, favor leaving the current fees as they are. The purpose of this research is to identify and evaluate the issues on both sides of the debate and to formulate recommendations.

This study uses historical and descriptive research methodology and seeks to answer these questions:

1. Which states have proposed or enacted legislation or rules regulating standby water fees/user fees?
2. What is a reasonable standby water fee/user fee?
3. What services do the water utility agencies provide to justify their standby water fees/user fees?
4. What alternatives are available to water utility agencies that depend on the revenue generated by standby water fees/user fees?

BACKGROUND AND SIGNIFICANCE

The National Fire Academy *Executive Leadership* course requires that each student complete an applied research project within six months of completing the class. This research is related to "Unit 12: Evaluating" of the *Executive Leadership* course. Analysis methods for complex situations, as illustrated in case studies presented with "Unit 12: Evaluating," were used in this research. The topic for this research was standby water fees/user fees for fire sprinkler system connections to water mains.

This research is important to the fire service for several reasons. The research:

- Identifies which states have proposed or enacted legislation or rules regulating standby water fees/user fees.
- Determines what is considered a reasonable standby water fee/user fee.
- Determines the services water utility agencies provide to justify their standby water fees/user fees.
- Determines alternatives available to water utility agencies that depend on the revenue generated by standby water fees/user fees.

Legislation proposing regulations on standby water fees has been debated in Florida for the past three years. The City of Boca Raton Utility Services Department could be faced with a \$200,000 budget short fall if the legislation were enacted. The City of Boca Raton Fire-Rescue Services Department has an interest in advocating fire sprinkler protection and assuring that the cost of maintaining fire sprinkler protection is reasonable.

LITERATURE REVIEW

Introduction

The literature review is subdivided into four main parts, one for each of the issues covered by the research questions. The purpose of the literature review is to determine what has been written about the issues.

State Legislation/Regulations on Standby Water Fees/User Fees

State of Florida

For the third consecutive year, legislation was filed with the State of Florida to prohibit standby water fees. "The National Fire Sprinkler Association (NFSA) affiliate chapter in Florida is already primed for the 1995 legislative session. On the agenda for this year again is the Standby Water Fee Prohibition bill to be sponsored by Florida Senator Pete Weinstein, though the association is still in need of a house sponsor on this issue" (Brumbeloe, January 1995, p. 24). Senator Weinstein's legislation was labeled "Senate Bill 776" and can be found in Appendix A. The proposed change to Florida Statute 180.192 reads, "A municipality within the state, or a private company or corporation under contract with a municipality pursuant to s. [statute] 180.17, which operates a waterworks system may not charge a rate for fire sprinkler system connections or any yard hydrants attached thereto. A municipal water system operator or a private water system operator may charge a reasonable rate if the needed fire flow for a property, as determined in accordance with the standards of the Insurance Services Office, creates a demand on the water supply system. This subsection does not prohibit a municipal water system operator or a private water system operator from charging connection fees, impact fees, or other user fees to offset costs directly attributable to facilitating a fire sprinkler system" (Florida Senate Bill 776, 1995, p. 2). A similar provision proposing an amendment to Florida Statute 153.64 for county water agencies was also included in Senate Bill 776. Senate Bill 776 died in committee before the end of the 1995 legislative session.

The Florida Fire Sprinkler Association's attempt with the legislation in 1994 was also unsuccessful. "We took a real beating from the private water companies this

year," the association stated in its report for the first quarter of 1994. "The private water companies simply do not wish to lose its standby water fee windfall...All waterworks companies should have the ability to stop leaks within its system as good as their lobbyists ability to stonewall our public interest legislation" (Wakeman/Walworth, June 1994, p. 120).

The best success with the legislation was attained in the first attempt in 1993 when the legislation passed the Senate, but died in the House of Representatives. "House Bill 2137, Fire Safety passed the Florida Senate but died on calendar before it could get a full reading in the House. The bill prohibits charging standby water fees to buildings with fire sprinkler system" (Wakeman/Walworth, June 1993, p. 10). The purpose of the legislation was written in *U. S. Fire Sprinkler Reporter*, "Penalizing consumers by charging monthly standby fees for their connection to the water main while not penalizing nonsprinklered buildings which drive up fire suppression costs and water supply distribution system costs is considered discriminatory" (Wakeman/Walworth, January 1993, p. 11).

The Florida Fire Sprinkler Association went on record opposing standby water charges as early as 1992. "According to Buddy Dewar, the Association's Executive Director, in some areas of the state almost 60 percent of the cost of installing a fire sprinkler system is related to excessive fees and regulations...excessive standby water charges...are making sprinkler systems unaffordable" (Brumbeloe, May 1992, p. 18).

There has been local opposition to these legislative attempts. J. M. Chansler, P.E., Director of Boca Raton Utility Services wrote, "Mr. Dewar has a point in that there may be no way to determine a fee for water standing in pipes, but he is being presumptive when he says, 'There is no reasonable monthly charge for fire sprinkler connections...'. Maintenance of the tapping sleeve and fire service line from the water main to the property line (and their eventual replacement) are the financial responsibility of the water supplier. Any damages incurred to pavement, sidewalks, landscaping, or anything else involved in that maintenance becomes a city liability. In the case of Boca Raton, it would not take much maintenance to cause more than even ten years worth of fees" (personal communication, March 16, 1993).

Boca Raton Utility Services remained opposed to the legislation in 1995. J. M. Chansler wrote, "If this legislation is adopted, the Utility Services Department would lose approximately \$210,500 in annual revenue under the existing fee schedule. The General Fund would lose approximately \$14,000 annually in utility tax money...The existing capacity charge on residential water bills would go from \$9.48 per unit to \$10.00 per unit if this revenue source is eliminated" (personal communication, April 4, 1995).

State of Maine

The standby water fee controversy in Maine started in 1993. Several complaints alleging excessive standby water fees were filed with the Maine Public Utilities Commission. "The Maine Association of Fire Sprinkler Contractors (MAFSC), led by NFSA [National Fire Sprinkler Association] member John Haynes of Eastern Fire Protection, has forced the Maine Public Utilities Commission (PUC) to address the problems brought on by excessive standby charges" (Lake, 1994, p. 13).

Some city and fire service leaders in Maine were opposed to regulations on standby water fees. Lake wrote, "Opposition to the proposed rule change, which would establish a statewide regulation governing the establishment of standby charges, came from some unexpected corners. In a meeting with State Fire Marshal Dennis Lundstedt, it was learned that the Maine Municipal Association and the Maine Fire Chiefs Association opposed any rule change which would eliminate standby fees for private fire protection systems. These groups had been informed by the water utilities that any reduction in standby fees would cause them to shift revenues to other areas, namely hydrant rental fees. This could subsequently have a detrimental effect on municipal and fire department budgets" (1994, p. 13).

The Maine Water Utilities Association defended their right to charge a reasonable fee. N.R. Lamie, P.E., President, Maine Water Utilities Association, wrote to the Maine Public Utilities Commission regarding possible rule changes. N. R. Lamie said, "Any changes in the rule should reflect a consistency as in respect to other utilities (electric, telephone)...Any change in the rule should consider that these costs may include, but may not be limited to the following: a. Operations and maintenance cost of certain portions of water distribution system, b. Billing and administrative cost, c. Inspections, d. Maintenance and ownership of the utility's portion of the service drop (typically 6 inch diameter or larger), e. The cost of readiness to serve a potential demand on a facility or system, f. Replacement and repair of the utilities portion of a service drop (many are located under major highways), g. Flow testing of a facility, and h. Water quality issues regarding private systems" (personal communication, November 11, 1994).

D. Lundstedt left no doubts regarding his position on standby water fees. In written comments to the Maine Public Utilities Commission, D. Lundstedt wrote, "The State Fire Marshal's Office is opposed to any standby charges assessed on properties protected by automatic sprinkler systems and recommends elimination of these fees" (personal communication, November 21, 1994). D. Lundstedt continued, "...as the primary statewide advocate of life safety and fire protection in Maine, we submit the standby charges applied to sprinklered buildings are a significant disincentive to sprinkler systems, are inordinately unfair and if put to a full legal test are likely to be ruled improper (personal communication, November 21, 1994).

Following public hearings and deadlines for the receipt of written comments, the Maine Public Utilities Commission (MPUC) met on March 20, 1995, to deliberate the issues. In the document adopting the rule, the MPUC cited testimony on the effectiveness of fire sprinkler systems "...in a comparative test conducted by Factory Mutual Research and Operation Life Safety organization, in extinguishing similar fires, the sprinkler system used 72 gallons of water while one fought by the fire department used over 20,000 gallons of water" (Maine Public Utilities Commission, April 11, 1995, p. 11). The disparity in standby charges between communities in Maine was also cited: "...for the same size service connection (six inch): Bucksport Water Company charges \$288.00 per year (for service covering a 25,000 square foot facility) whereas the Millinocket Water Company charges \$1,640.20 (covering a 7,000 square foot area)" (Maine Public Utilities Commission, April 11, 1995, p. 17).

At the April 11, 1995, meeting the MPUC adopted the noncontroversial portions of the rule. MPUC allowed user fees for "1. Depreciation and debt service or return on utility investment in the service drop portion of the private fire service lines; 2. Normal maintenance and repair of the service drop portion of private fire service lines; 3. Any maintenance, repair, inspection, or testing services performed routinely by the utility for all private fire protection service customers; and 4. A reasonable allowance for the cost of water used for flushing and testing the private fire service lines" (Maine Public Utilities Commission, April 14, 1995, p. 3).

The controversial, nonadopted portion of the rule states, "A water utility's private fire protection charge shall not include: 1. Any allocation of capital or maintenance costs for back-up capacity or back-up facilities unless added and maintained by the utility solely for the benefit of the private fire protection customer" (Maine Public Utilities Commission, August 22, 1995, p. 3). The MPUC ordered the formation of a task force, comprised of affected interest groups to study the issues regarding backup capacity costs. "...the task force will provide a midcourse report on its progress by the end of 1995 and will submit its recommendations to this Commission by July 1, 1996" (Maine Public Utilities Commission, April 11, 1995, p. 41). Standby water fees will remain a hot topic in Maine.

Reasonable Standby Water Fees/User Fees

Is an annual charge of \$288 by the Bucksport Water Company in Maine a reasonable fee for a six-inch fire sprinkler system connection? The Millinocket Water Company in Maine charges 5 times more: \$1,640 for the same size (6-inch). Aronson and Schwartz (1987) in the International City Management Association (ICMA) publication Management Policies in Local Government Finance wrote, "Some charges serve as a revenue source or as a method of allocating service among users without consideration of costs" (p. 261). Wahl (1991) in the National Fire Protection Association (NFPA) Fire Protection Handbook echoes the ICMA opinion. Wahl wrote, "Annual charges for connections to fire protection systems are often established

in water rate schedules for the sole purpose of obtaining additional revenue" (1991, p. 5-67).

Many water utility agencies are "enterprise funded." Enterprise fund is defined by the Government Finance Officers Association (GFOA) in Governmental Accounting, Auditing, and Financial Reporting as "A fund established to account for operations financed and operated in a manner similar to private business enterprises (e.g., water, ...utilities...). In this case the governing body intends that costs ... of providing goods or services to the general public on a continuing basis be financed or recovered primarily through user charges" (Government Finance Officers Association, 1988, p. 162).

Bland (1989) in A Revenue Guide for Local Government offered suggestions on cost analyses for setting reasonable fees. Bland wrote, "...the use of service charges by local governments requires that all charges and fees be reviewed annually and that rates be adjusted to reflect changes in the cost of service delivery" (1989, p. 118). Bland also wrote, "Legally, cost analyses provide evidence of the reasonableness of a charge. They can buttress a government's contention that its prices were not arbitrarily set..." (1989, p. 121).

Some water utility agencies charge nothing for fire sprinkler system connections to water mains. This could be viewed as an incentive to install fire sprinkler protection. "If the goal of the fire service is to have all buildings protected by sprinklers, the objective must be to make it cheaper to install them than it is to omit them. More cost-related incentives must be offered, and deterrents removed" (Paige, June 1990, p. 44).

Some people within the fire service community are of the opinion that all user fees for fire sprinkler system connections to water mains are unreasonable. Endthoff (1994) wrote, "Building owners should not be charged additional fees for providing a fire sprinkler system when they are also paying for the main and fire hydrants at the street" (p. 7). Paige (1990) said, "Water Purveyors who penalize the owners of sprinklered buildings should reevaluate their rate schedules" (p. 44). Nielsen (1990) wrote, "Government makes the building owner install these sometimes costly items to meet local and national codes and then penalizes the same owner through a separate fee system. This fee system is placed upon the building's water bill. This is a form of double jeopardy" (p. 82). Coleman (1993) expressed the frustration of many fire officials: "So what are we doing assessing these systems 'standby charges'? For what? Less water than fills up a Jacuzzi, less pressure demand than the combined flushing of all the toilets in a housing tract at half-time for the Super Bowl. Hey water guys, what is the deal?" (p. 51).

Services Provided to Justify Standby Water Fees/User Fees

There are a number of services that should be provided for fire sprinkler system connections to water mains. Some services have already been identified in this report (see the Maine Utilities Association list on page 170 and the Maine Public Utilities Commission rule list on page 171).

There are administrative services and costs in providing fire sprinkler system connections to water mains. "In general, user charges should reflect the full costs of service, including operation, maintenance, and capital costs for production and distribution" (Aronson & Schwartz, 1987, p. 269).

Mapping of connections and street valves is a one-time service. "Water systems cannot function efficiently if the only records of locations and size of mains, valves, and services are stored in the minds of a few employees. Management has to devise and carry out a procedure that will generate a complete record system of maps and files that can be used by any trained person" (Cristofano & Foster, 1986, p. 286).

Annual inspection and maintenance of street valves serving the fire sprinkler system is an important service. "Every gate valve should be checked and operated every one to three years depending on size and importance. The number of turns to open and close the valve should be counted to make certain that the valve is fully open...A separate maintenance card should be kept for each valve" (Cristofano & Foster, 1986, p. 286). Wahl wrote, "Gate valves should be operated periodically to ensure that they are in proper working condition and that gate boxes are not silted up or tarred over" (1991, p. 5-64). "The function of a valve in a water distribution system is to provide a means of controlling the flow of water through the distribution piping. Valves should be operated at least once a year to keep them in good condition...The importance of a valve maintenance program cannot be overemphasized" (Fire Protection Publications, 1988, pp. 60-61).

Contingency funding for the eventual replacement of the pipe and valves, owned by the water utility agency serving the fire sprinkler system is a service. "No vehicle, piece of equipment, or water supply facility will last indefinitely...It is one of management's responsibilities to see that the system does not become obsolete" (Cristofano & Foster, 1986, p. 287).

Many services should be provided; however most are recommended and no reference to mandated requirements was found in the literature review.

Alternatives for Standby Water Fee/User Fee Revenues

Most water utility agencies are enterprise funded and alternatives for lost revenues are necessary.

Some of the alternatives proposed by water utility agencies have not been greeted with enthusiasm by the fire service. "...[The Maine Municipal Association and the Maine Fire Chiefs Association] had been informed by the water utilities that any reduction in standby fees would cause them to shift revenues to other areas, namely hydrant rental fees. This would subsequently have a detrimental effect on municipal and fire department budgets" (Lake, 1994, p. 13).

Nonsprinklered buildings create the fire flow requirement for the water distribution system. "The quality and pressure demand for water within a community is based on the needed fire flow for nonsprinklered buildings. Property owners of sprinklered buildings are paying for the water supply burden created by non-sprinklered buildings" (B. Dewar, personal communication, February 22, 1993). This philosophy would indicate that the redirected cost burden should be shifted to nonsprinklered buildings.

The most equitable cost-shift may be to all customers. In response to "What is the correct back-up capacity and facilities cost allocation among a utility's private and public fire protection services and other services?" ...D. Lundstedt responded..."Equal, with no special allocation for a customer with a sprinkler system" (personal communication, November 21, 1994).

Summary

The most notable outcome of the literature review was the revelation that the State of Florida was not alone in debating the standby water fee/user fee issue. I learned the issue was well known to many in the State of Maine. This finding influenced my decision to conduct a survey of all 50 state fire marshals to determine if other states were also debating the issue.

Many sources in the literature review spoke of excessive standby water fees/user fees. However, no one placed a dollar amount on a reasonable standby water fee/user fee. This influenced my decision to conduct a survey of water utility agencies in Broward County, Florida, and Palm Beach County, Florida. The City of Boca Raton is the southernmost community in Palm Beach County and shares a border with Broward County. The "Water Utility Director Survey" would provide a local comparison of standby water fees/user fees.

The lists of services provided in several documents in the literature review became the foundation for question #5 in the "Water Utility Director Survey."

PROCEDURES

Introduction

Two separate surveys were conducted to answer the research questions. Both surveys are detailed here.

State Fire Marshal Survey

Population

State fire marshals in all 50 U.S. states were the target of the survey questionnaire. The mailing list was obtained from the Fire Marshals Association of North America.

Instrumentation

The goal for the "State Fire Marshal Survey" was to answer research question #1.

Question #1 asked if there were any state laws currently in effect that prohibit or regulate standby water fees/user fees for fire sprinkler system connections to water mains. The state fire marshal was asked to provide a copy if the answer was "yes."

Question #2 asked if any state laws had been proposed that were intended to prohibit or regulate standby water fees/user fees for fire sprinkler system connections to water mains. Again, the state fire marshal was asked to provide a copy if the answer was "yes."

Question #3 asked if the state fire marshal knew of any legal challenges regarding standby water fees/user fees for fire sprinkler system connections to water mains. They were asked to be specific if the answer was "yes."

Question #4 asked if there were any statewide incentives to support the installation of fire sprinkler systems contained in the state laws.

Question #5 asked for any additional information that would be helpful in the research.

The questionnaire was reviewed by members of the Boca Raton Fire-Rescue Services Department. Some modifications to the format of the questionnaire were made. A copy of the survey questionnaire is displayed in Appendix B.

Assumptions and Limitations

It is assumed that only knowledgeable individuals responded to the surveys and that they did so honestly.

The survey provides representation from all 50 state fire marshals. No statistical analysis was made to determine the margin of error in the survey results.

Tabulation of Surveys

One month was allowed for returning the completed surveys. Of the 50 questionnaires mailed, 32 were returned by the first deadline. A "second request" was mailed to the 18 outstanding states. Three weeks was allowed for returning the "second request." Of the 18 outstanding states, 15 state fire marshals returned the completed surveys by the second deadline. A "third request" was made by telephone and fax to the three remaining states. All three provided completed survey questionnaires. All survey questionnaires were tabulated.

Water Utility Director Survey

Population

All water utility directors in Broward County, Florida (26), and Palm Beach County, Florida (17), were the target of the survey questionnaire. The mailing list was obtained from the City of Boca Raton Utility Services Department.

Instrumentation

The goal for the "Water Utility Director Survey" was to answer research questions #2, #3, and #4.

Question #1 asked the water utility director to indicate whether the water utility agency was publicly or privately owned.

Question #2 asked if the water utility agency was primarily "enterprise funded."

Question #3 asked if the water utility agency charged a standby water fee/user fee for fire sprinkler system connections to water mains. A copy of the rate schedule was requested if the answer was "yes."

Question #4 asked for the total amount of annual revenue collected for standby water fees/user fees by the water utility agency.

Question #5 asked the water utility director to identify all the services provided for by the standby water fees/user fees. Seven possible services were listed. The listed services were determined from the literature review. The seven listed services were administrative costs, mapping of connections and street valves, annual inspection and maintenance of street valves, actual water used for inspection and flushing fire sprinkler systems, estimate for water that could be used if the building caught fire, charges to maintain fire flow capability for the entire system, and contingency funding for the eventual replacement of the pipe and valves. The water utility director was asked to specify any other services.

Question #6 referred the water utility director to an enclosed copy of Florida Senate Bill 776. The water utility director was asked how the water utility agency would raise replacement revenues if it was prohibited from charging all or part of the standby water fees/user fees.

Question #7 asked for any additional information that would be helpful in the research.

The questionnaire was reviewed by members of the City of Boca Raton Utility Services Department. A copy of the survey questionnaire is displayed in Appendix B.

Assumptions and Limitations

It is assumed that only knowledgeable individuals responded to the surveys and that they did so honestly.

The survey is not representative of the entire water utility industry. No statistical analysis was made to determine the margin of error in the survey results.

Tabulation of Surveys

One month was allowed for returning the completed surveys. Of the 43 questionnaires mailed, 21 were returned by the first deadline. A "second request" was mailed to the 22 outstanding water utility directors. Three weeks was allowed for returning the "second request." Of the 22 outstanding water utility agencies, 17 water utility directors returned the completed surveys by the second deadline. A "third request" was made by telephone and fax to the five remaining water utility agencies. All five provided completed survey questionnaires. All survey questionnaires were tabulated.

RESULTS

State Fire Marshal Survey

Only the Wisconsin State Fire Marshal indicated that current state laws regulate standby water fees/user fees for fire sprinkler system connections to water mains. Specific information was not available. None of the states have current laws that prohibit standby water fees/user fees.

State fire marshals from six states (California, Florida, Louisiana, Maine, New Jersey, and Wisconsin) indicated that state laws had been proposed that would prohibit or regulate standby water fees/user fees. The issues in Florida and Maine were detailed in the literature review portion of this study. The California Public Utilities Commission (CPUC) instituted an investigation of rate-making policies and other matters on November 20, 1990. The CPUC issued a report on October 20, 1994, following workshops with representatives of the water utilities. The California State Fire Marshal's office was present for discussions on customer charges based on fire flow requirements. Issues have been identified, including standby water fees; however, the CPUC has not taken any actions on the rate-making policies. The Louisiana State Fire Marshal provided a copy of a Senate bill from the 1991 legislative session that was intended to prohibit the placement of water meters on fire sprinkler system fire lines. The New Jersey State Fire Marshal included proposed legislation, titled, "Assembly, no. 2038," introduced on August 29, 1994. The summary stated, "This bill prohibits water companies and authorities in the State from charging a fee for standby water service to property owners whose buildings are equipped with automatic sprinkler systems. The bill permits water companies to charge a property owner for actual costs of water main connection necessary for the installation of the sprinkler system but does not permit them to charge any other fees in excess of the cost of water actually used for the sprinkler system" (New Jersey Assembly no. 2038, August 29, 1994, p. 5). At the suggestion of the New Jersey State Fire Marshal's Office, I requested and received a copy of the standby water fee/user fee schedule for Atlantic City, New Jersey. I was told Atlantic City had the highest fees in New Jersey. Atlantic City charges a flat fee plus a metered fee for actual water used. The annual fee amounts are: \$800 for 4-inch connections, \$1,200 for 6-inch connections, \$2,000 for 6-inch connections with a fire pump, \$3,600 for 8-inch connections, \$6,000 for 10-inch connections, and \$8,000 for 12-inch connections. The Wisconsin response indicated proposals to regulate standby water fees, but specifics could not be obtained.

Only Maine acknowledged a legal challenge to standby water fees/user fees (detailed in the literature review).

State fire marshals from eight states indicated that statewide incentive programs existed to support the installation of fire sprinkler systems in their state laws. Responses from Louisiana, Maine, Maryland, North Carolina, and Wisconsin indicated building construction trade-off incentives or mandatory requirements.

Responses from 3 states, Alaska, California, and Minnesota, indicated direct monetary incentives. Alaska state law allows two percent of the assessed value of a structure to be exempt from property tax if the structure contains an operating fire sprinkler system. The California State Fire Marshal's office drafted Guidelines for Incentives Relevant to One- and Two-Family Residential Fire Sprinklers. Fire service standby charges are discouraged in the document. Minnesota state law exempts the market value of automatic fire sprinkler protection from state property tax in certain residential occupancies. Minnesota also exempts sales tax from the gross receipts of fire sprinkler systems sales.

Under the request for additional information the Delaware State Fire Marshal's office provided a listing of standby water charges from across their state from a survey conducted in September 1994. Nine water utility agencies, serving mostly residential areas, reported not charging any standby water fees. Nine other water utility agencies reported fees as low as \$60 per year for a 4-inch connection. The Tidewater Utilities company had the highest annual fees: \$1,716 for 4-inch connections, \$3,324 for 6-inch connections, and \$5,252 for 8-inch connections. A summary of all the Delaware fees can be found in Appendix C.

Most of the "State Fire Marshal Survey" results can be found in Appendix D.

Water Utility Director Survey

Four tables are provided in Appendix E that detail portions of the "Water Utility Director Survey" results.

Only two (4.7 percent) water utility agencies, both in Broward County, reported being privately owned. The majority (41, 95.3 percent) were found to be owned by government agencies.

Most (41, 95.3 percent) water utility agencies reported being "enterprise funded." Only two water utility agencies (4.7 percent) stated that they were not "enterprise funded."

Table 1
Standby Water Fees/User Fees--Comparison

Size	Broward Average	Palm Beach Average	Combined Average	Jupiter Fees	Boca Raton Fees
4"	\$203	\$323	\$263	\$1,231	\$197
6"	\$389	\$579	\$488	\$2,412	\$444
8"	\$662	\$935	\$804	\$3,842	\$790
10"	\$825	\$1,616	\$1,299	\$5,508	\$1,234
12"	\$796	\$4,861	\$2,538	\$10,283	

A little more than one-half (23, 53.5 percent) of the 43 water utility agencies in the 2-county area charge a standby water fee/user fee for fire sprinkler system connections to water mains. The percentage is higher (12/17, 70.6 percent) in Palm Beach County. Only 42.3 percent (11/26) of the water utility agencies in Broward County charge fees. A significant number (20, 46.5 percent) of water utility agencies in the 2-county area do not charge a standby water fee/user fee.

Rate schedules for standby water fees/user fees for fire sprinkler system connections to water mains were supplied by the 23 water utility agencies that charge fees. The rate schedules are based on the size of the connection. This study collected the rates for 4-, 6-, 8-, 10-, and 12-inch connections (see Appendix E/Table E-3 and Table E-4). Some water utility agencies only established fees for the connection sizes found in their service area. Averages established in this study are based on the number of agencies charging a fee for a certain size connection (see Appendix E/Table E-5 for the average calculations). The average calculations would be significantly different if all the water utility agencies charging nothing (\$ -0-) for the service were factored in. The average rates for Broward County, Palm Beach County, and the combination of both counties can be found in Table 1. Palm Beach County standby water fees/user fees for 4-, 6-, and 8-inch connections are 46.5 percent higher on average than Broward County (see Calculation #4 in Appendix E/Table E-5). Jupiter, Florida, reported the highest rates in the two-county area. Jupiter standby water fees/user fees for 4-, 6-, 8-, 10-, and 12-inch connections are 331.7 percent higher on average than the combined average for Broward County and Palm Beach County (see Calculation #5 in Appendix E/Section e-5). Boca Raton, Florida, standby water fees/user fees for 4-, 6-, 8-, and 10-inch connections were 6.6 percent lower on average than the combined average for Broward County and Palm Beach County (see Calculation #6 in Appendix E/Section E-5). Jupiter and Boca Raton fees also may be found in Table 1.

Table 2
Services Provided for Standby Water Fees/User Fees

Service (based on 23 responses)	no.	%
Administrative costs	22	95.7
Mapping of connections and street valves	14	60.9
Annual inspection and maintenance of street valves	14	60.9
Actual water used for inspection and flushing	13	56.5
Estimate for water that could be used during a fire	7	30.4
Charges to maintain fire flow capability	15	65.2
Contingency funding for eventual replacement of pipe	9	39.1
Other	1	4.3

Water utility agencies in Broward County reported a total of \$743,181 in annual revenue for standby water fees/user fees. Water utility agencies in Palm Beach County reported a total of \$1,042,020 in annual revenue for standby water fees/user fees. The grand total for both counties is \$1,785,201.

Table 3
Alternatives for Standby Water Fees/User Fees

Alternative	no.	%
Increased fees to all other customers	16	69.6
No answer	5	21.7
Will not seek to replace fees	1	4.3
Will challenge the legality of the regulation	1	4.3
Total	23	99.9

"Administrative costs" was reported as the most common (22, 95.7 percent) service provided by the 23 water utility agencies that charge standby water fees/user fees. "Charges to maintain fire flow capability" (15, 65.2 percent) and "Estimate for water that could be used during a fire" (7, 30.4 percent) are typically considered "standby charges" and were common among the water utility agencies charging fees. All of the "service" results can be found in Table 2.

A majority (69.6 percent) of water utility directors in Broward County and Palm Beach County indicated that they would raise water fees for all other customers if a state law were enacted that prohibited their agency from charging all or part of their standby water fees/user fees. Five water utility directors did not provide an answer. One water utility director wrote, "No point in tipping you off, providing an opportunity to close that avenue through legislation" (anonymous comment). All of the alternatives can be found in Table 3.

Few comments were written in response to question #7. However, one water utility director who does not charge a standby water fee/user fee wrote, "The probability of actual use of a fire line versus the use of a similar sized domestic line are so unbalanced that the assessment of a standby charge would be generally perceived as inequitable" (anonymous comment).

DISCUSSION

Introduction

The discussion is subdivided into four main parts, one for each of the issues covered by the research questions and a summary.

State Legislation/Regulation on Standby Water Fees/User Fees

The literature review provided detailed information on the standby water fee/user fee issue in Florida and Maine. The "State Fire Marshal Survey" revealed that legislative bodies in California, Louisiana, New Jersey, and Wisconsin also had dealt with the issue in recent years. New Jersey's "Assembly no. 2038" was similar to Florida's proposed legislation.

Reasonable Standby Water Fees/User Fees

The literature review indicated a wide margin in standby water fees/user fees for fire sprinkler system connections to water mains. Bucksport Water Company in Maine has an annual charge of \$288 for a 6-inch connection. The Millinocket Water Company, also in Maine, charges 5 times more at \$1,640 for a 6-inch connection. In the "State Fire Marshal Survey" we found that Atlantic City, New Jersey charges \$2,000 annually for a 6-inch connection with a fire pump. The wide margin also was evident in Delaware; the Milford water utility charges \$60 annually for a 6-inch connection, while the Tidewater water utility charges 55 times more at \$3,324.

The disparity also was evident at the local level. The "Water Utility Director Survey" revealed that 20 water utility agencies in Broward County and Palm Beach County do not charge a standby water fee/user fee. In the same 2-county area, 23 water utility agencies charge an annual fee from \$65 to \$2,412 (37 times higher) for a 6-inch connection.

Some within the fire service that are proposing statewide regulation claim that water utility agencies charge excessive fees. Where is the line drawn between reasonable and excessive?

For many the line is drawn at zero dollars. Many sources within the fire service were cited in the literature review as being opposed to all standby water fees/user fees. This position was supported by 20 water utility agencies in Broward County and Palm Beach County that do not charge a standby water fee/user fee. One water utility director wrote, "The probability of actual use of a fire line versus the use of a similar sized domestic line are so unbalanced that the assessment of a standby charge would be generally perceived as inequitable" (anonymous comment).

For 23 water utility agencies in the 2-county area the line is drawn above zero dollars. The literature review found that many water utility agencies are "enterprise funded." This finding was supported by the "Water Utility Director Survey" with 41 (95.3 percent) of the agencies in Broward County and Palm Beach County reporting that they were "enterprise funded."

I cannot draw a specific line between reasonable and excessive. This study cannot identify a specific dollar amount for a reasonable standby water fee/user fee. However, this study determined local averages for standby water fees/user fees (see Table 1), providing a benchmark for others to use when evaluating their fees. The study also ranked the 43 water utility agencies in the 2 counties, for annual standby water fees/user fees for 6-inch connections from highest to lowest (see Appendix E, table E-6). This provides another benchmark for comparison.

Boca Raton standby water fees/user fees were found to be six percent lower on average than the combined average for the two counties. This appears to be reasonable until you see that Boca Raton placed 11th on the ranking list in Appendix E, Table E-6.

Services Provided to Justify Standby Water Fees/User Fees

The literature review found several lists of services provided by water utility agencies used to justify standby water fees/user fees. The "Water Utility Director Survey" identified how frequently these justifications are used. "Administrative costs" received the highest ranking at 95.7 percent, while "estimate for water that could be used during a fire" received the lowest ranking at 30.4 percent.

Many within the fire service take exception to "charges to maintain fire flow capability" which was listed as a service by 15 (65.2 percent) of the 23 water utility agencies that charge standby water fees/user fees in Broward County and Palm Beach County. Fire flow capability is affected to a greater extent by nonsprinklered buildings. From the literature review, Endthoff (1994) wrote, "Building owners should not be charged additional fees for providing a fire sprinkler system when they are also paying for the main and fire hydrants at the street" (p. 7).

Alternatives for Standby Water Fee/User Fee Revenues

Alternatives are necessary as the majority of water utility agencies are "enterprise funded." The combined annual revenue for Broward County and Palm Beach County was found to be \$1,785,201.

In the literature review arguments were presented to shift the burden to nonsprinklered buildings or to all customers. In Maine at least one proposal suggested

shifting the cost to the fire service by raising hydrant rental fees. The "Water Utility Director Survey" found the most desirable (69.6 percent) shift would be to all customers. In Boca Raton, J.M. Chansler estimated, "The existing capacity charge on residential water bills would go from \$9.48 per unit to \$10.00 per unit if this revenue source is eliminated" (personal communication, April 4, 1995).

Summary

At this point a distinction needs to be made between "standby water fees" and "user fees" for water service. In my opinion, reasonable "user fees" include "administrative costs," "mapping of connections and street valves," "annual inspection and maintenance of street valves," "actual water used for inspection and flushing," and "contingency funding for eventual replacement of pipe." My position on this issue is similar to the findings of the Maine Public Utilities Commission.

In my opinion, "standby water fees" include "estimate for water that could be used during a fire," and "charges to maintain fire flow capability." Owners of nonsprinklered buildings are not charged a one-time fee for the thousands of gallons of water used by the fire department when their building burns to the ground. Owners of buildings equipped with fire sprinkler systems should not be charged every month for the small quantity of water that could be used at some point in the future to save their building. Owners of all buildings pay water fees to "maintain the fire flow capability." Owners of buildings equipped with fire sprinkler systems, which require a fraction of the water needed by a nonsprinklered building, should not be charged an additional fee. My position on this issue is similar to that of Endthoff (1994), Paige (1990), and Nielsen (1990).

RECOMMENDATIONS

Manufacturers of fire sprinkler system equipment charge a reasonable price for their products. Contractors who install fire sprinkler systems charge reasonable prices for their labor. Many fire service agencies charge reasonable permit fees for their plan review and inspection services. Water utility agencies that provide the water to make the fire sprinkler system function should not be denied the right to charge a reasonable "user fee" for that service. However, water utility agencies should eliminate "standby water fees" which include "estimate for water that could be used during a fire" and "charges to maintain fire flow capability" from their rate structure. The "standby" charges are unfair and unreasonable.

According to the survey results, Boca Raton Utility Service's fees for fire sprinkler system connections to water mains included "charges to maintain fire flow capability." Boca Raton fees should be adjusted to eliminate these charges.

Water utility agencies in Broward County and Palm Beach County should use the information in this report, especially the "combined average" rates found in Table 1 and the "ranking (highest to lowest): standby water fees/user fees" found in Appendix E/Table E-6 as benchmarks to determine how reasonable their fees are. The 16 water utility agencies (see Appendix E/Table E-6) that indicated their fees included "estimate for water that could be used during a fire" and "charges to maintain fire flow capability" should adjust their rates to eliminate these charges.

Whereas most of the water utility agencies are "enterprise funded," revenue lost with eliminating "standby water fees" will need to be made up elsewhere. I support the majority of water utility directors by recommending that the costs be passed along to all water utility customers.

Finally, I recommend that fire service agencies and water utility agencies open up lines of communication and work together to assure that the cost of maintaining a fire sprinkler system is fair and reasonable.

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APPENDIX A

Appendix A is a copy of Florida Senate Bill 776 from the 1995 legislative session:

APPENDIX B

Appendix B contains copies of the two survey questionnaires.

**A STUDY OF STANDBY WATER FEES/USER FEES FOR FIRE SPRINKLER SYSTEM
CONNECTIONS TO WATER MAINS**

State Fire Marshal Survey Questionnaire

LABEL

Please make the necessary corrections to the information on the
mailing label.

1. Are there any State laws currently in effect in your State that prohibit or regulate standby water fees/user fees for fire sprinkler system connections to water mains?
 - a. Yes (please provide a copy).
 - b. No.

2. Have any State laws been proposed in your State that are intended to prohibit or regulate standby water fees/user fees for fire sprinkler system connections to water mains?
 - a. Yes (please provide a copy).
 - b. No.

3. Do you know of any legal challenges regarding water fees/user fees for fire sprinkler system connections to water mains?
 - a. Yes (please specify).
 - b. No.

4. Are there any statewide incentives to support the installation of fire sprinkler systems contained within your State laws?
 - a. Yes (please specify).
 - b. No.

5. Please provide any other information that would be helpful in this research:

Please return this survey questionnaire by **April 30, 1995** to:
Commander Thomas R. Wood
Boca Raton Fire-Rescue Services
2333 West Glades Road
Boca Raton, FL 33431-7311

**A STUDY OF STANDBY WATER FEES/USER FEES FOR FIRE SPRINKLER SYSTEM
CONNECTIONS TO WATER MAINS**

State Fire Marshal Survey Questionnaire

LABEL

Please make the necessary corrections to the information on the
mailing label.

1. Please indicate your agency type:
 - a. Publicly owned (municipal/county government).
 - b. Privately owned.
2. Is your agency primarily "enterprise funded?"
 - a. Yes.
 - b. No.
3. Does your agency charge a standby water fee/user fee for fire sprinkler connections to water mains?
 - a. Yes (Please provide a copy of the rates).
 - b. No.
 - c. Other--metering.
4. What is the total amount of annual revenue for these fees for your agency?
\$ _____
5. What services does your agency provide for these fees?
(Please circle all that apply)
 - a. Administrative costs.
 - b. Mapping of connections and street valves.
 - c. Annual inspection and maintenance of street valves.
 - d. Actual water used for inspection and flushing fire sprinkler systems.
 - e. Estimate for water that could be used if building caught fire.
 - f. Charges to maintain fire flow capability for the entire system.
 - g. Contingency funding for eventual replacement of pipe and valves.
 - h. Other--please specify: _____.
6. If a State law were enacted that prohibited your agency from charging all or part of the standby water fees/user fees (See the enclosed Senate Bill #776), and your agency was faced with losing the revenues listed in Item #2; where would your agency be likely to raise replacement revenues?
7. Please provide any other information that would be helpful in this research.

Please return this survey questionnaire by **May 31, 1995** to:
Commander Thomas R. Wood, Boca Raton Fire-Rescue Services, 2333 West Glades Road
Boca Raton, FL 33431-7311

APPENDIX C

Appendix C is a summary of information provided by the Delaware State Fire Marshal on standby water fees within the State of Delaware. The information was gathered in September 1994. Note: Those agencies that only charge the fee for service outside the city limits are shown with an asterisk (*).

Agency Name	4"	6"	8"	10"	12"
Artesian Water	\$840	\$1,684			
Dover*	\$300	\$600	\$1,000	\$1,400	\$1,800
Georgetown	\$1,000	\$1,200	\$1,200		
Milford	\$60	\$60	\$60	\$60	\$60
Sussex Shores	\$320	\$320	\$320	\$320	\$320
Tidewater	\$1,716	\$3,324	\$5,252		
White Havens	\$320	\$320	\$320	\$320	\$320
Wilmington*	\$988	\$1,316	\$1,872		
Wilmington Sub.	\$488	\$1,100	\$1,952	\$3,052	\$4,400
Totals	\$6,032	\$9,924	\$11,976	\$5,152	\$6,900

Calculations--Delaware Standby Water Fee/User Fee Average:

4"	\$6,032/9	=	\$670
6"	\$9,924/9	=	\$1,102
8"	\$11,976/8	=	\$1,497
10"	\$5,152/5	=	\$1,030
12"	\$6,900/5	=	\$1,380

APPENDIX D

Appendix D is an alphabetical listing of all 50 states, with the answers to the four primary questions from the "State Fire Marshal Survey" questionnaire. The following abbreviations are used here: Q is for "Question," Y is for "Yes," and N is for "No."

<u>State</u>	<u>Q-1</u>	<u>Q-2</u>	<u>Q-3</u>	<u>Q-4</u>
Alabama	N	N	N	N
Alaska	N	N	N	<u>Y</u>
Arizona.....	N	N	N	N
Arkansas.....	N	N	N	N
California	N	<u>Y</u>	N	<u>Y</u>
Colorado.....	N	N	N	N
Connecticut	N	N	N	N
Delaware	N	N	N	N
Florida	N	<u>Y</u>	N	N
Georgia.....	N	N	N	N
Hawaii	N	N	N	N
Idaho	N	N	N	N
Illinois	N	N	N	N
Indiana	N	N	N	N
Iowa	N	N	N	N
Kansas	N	N	N	N
Kentucky	N	N	N	N
Louisiana.....	N	<u>Y</u>	N	<u>Y</u>
Maine	N	<u>Y</u>	<u>Y</u>	<u>Y</u>
Maryland.....	N	N	N	<u>Y</u>
Massachusetts	N	N	N	N
Michigan	N	N	N	N
Minnesota.....	N	N	N	<u>Y</u>
Mississippi	N	N	N	N
Missouri	N	N	N	N
Continued				

<u>State</u>	<u>Q-1</u>	<u>Q-2</u>	<u>Q-3</u>	<u>Q-4</u>
Montana	N	N	N	N
Nebraska	N	N	N	N
Nevada	N	N	N	N
New Hampshire.....	N	N	N	N
New Jersey	N	<u>Y</u>	N	N
New Mexico.....	N	N	N	N
New York.....	N	N	N	N
North Carolina.....	N	N	N	<u>Y</u>
North Dakota.....	N	N	N	N
Ohio	<u>Y</u>	-	N	N
Oklahoma.....	N	N	N	N
Oregon	N	N	N	N
Pennsylvania	N	N	N	N
Rhode Island	N	N	N	N
South Carolina	N	N	N	N
South Dakota.....	N	N	N	N
Tennessee.....	N	N	N	N
Texas	N	N	N	N
Utah.....	N	N	N	N
Vermont	N	N	N	N
Virginia	N	N	N	N
Washington	N	N	N	N
West Virginia	N	N	N	N
Wisconsin.....	<u>Y</u>	<u>Y</u>	N	<u>Y</u>
Wyoming	N	N	N	N
Totals	Y-2	Y-6	Y-1	Y-8

APPENDIX E

Appendix E is a summary of the "Water Utility Director Survey" results for water utility agencies in Broward County, Florida and Palm Beach County, Florida, and is shown on the following tables/sections:

Appendix E/Table E-1

Broward County Water Utility Director Survey Results

Appendix E/Table E-2

Palm Beach County Water Utility Director Survey Results

Appendix E/Table E-3

Broward County Standby Water Fees/User Fees - Annual Amount

Appendix E/Table E-4

Palm Beach County Standby Water Fees/User Fees - Annual Amount

Appendix E/Section E-5

Calculations - Standby Water Fees/User Fees

Appendix E Table E-6

Ranking of Broward County and Palm Beach County Standby Water Fees/User Fees for 6-inch Connections on an annual basis (highest to lowest, alphabetical where the fee is the same)

Note:

The numbers across the top of headings of Tables E-1 and E-2 are the question/answer numbers. The answers for questions #1, #2 and #3 are listed in the column below them. The answer to question #4 is a dollar amount. An "X" in the column below all the #5 questions indicates a positive response.

Appendix E/Table E-1
Broward County Water Utility Director Survey Results

<u>Agency Name</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5A</u>	<u>5B</u>	<u>5C</u>	<u>5D</u>	<u>5E</u>	<u>5F</u>	<u>5G</u>	<u>5H</u>
Broward County	A	A	A	\$150,000	X		X					
Coconut Creek	A	A	B	\$ -0-								
Cooper City	A	A	B	\$ -0-								
Coral Springs	A	A	C	\$ -0-								
Coral Sprgs. Im.	A	A	B	\$ -0-								
Dania	A	A	A	\$ 4,632	X	X	X			X	X	
Davie	A	A	A	\$ 18,600	X					X		
Deerfield Beach	A	A	B	\$ -0-								
Ferncrest	B	A	B	\$ -0-								
Fort Lauderdale	A	A	A	\$379,700	X	X	X		X	X		
Hallandale	A	A	A	\$ 22,000	X	X	X	X	X	X	X	
Hillsboro Beach	A	A	B	\$ -0-								
Hollywood	A	A	A	\$ 40,000	X		X	X				
Lauderhill	A	A	B	\$ -0-								
Margate	A	A	A	\$ 22,800	X			X	X			
Miramar	A	B	B	\$ -0-								
North Lauderdale	A	A	B	\$ -0-								
North Springs	A	A	B	\$ -0-								
Oakland Park	A	A	A	\$ 1,253	X		X	X				
Parkland	B	A	B	\$ -0-								
Pembroke Pines	A	A	B	\$ -0-								
Plantation	A	A	B	\$ -0-								
Pompano Beach	A	A	B	\$ -0-								
Sunrise	A	A	A	\$ 58,506	X	X		X			X	
Tamarac	A	A	A	\$ 44,490	X							
Wilton Manors	A	A	A	\$ 1,200	X	X	X	X	X	X	X	
Totals				\$743,181	11	5	7	6	4	5	4	0
Question #1	A/24,	B/2										
Question #2	A/25,	B/1										
Question #3	A/11,	B/14,	C/1									

Appendix E/Table E-2
Palm Beach County Water Utility Director Survey Results

<u>Agency Name</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5A</u>	<u>5B</u>	<u>5C</u>	<u>5D</u>	<u>5E</u>	<u>5F</u>	<u>5G</u>	<u>5H</u>
Acme	A	B	B	\$ -0-								
Boca Raton	A	A	A	\$197,200	X	X	X			X		
Boynton Beach	A	A	B	\$ -0-								
Delray Beach	A	A	B	\$ -0-								
Highland Beach	A	B	A	\$ 19,920	X	X						
Jupiter	A	A	A	\$188,000	X	X	X	X	X	X	X	
Lake Worth	A	A	A	\$ 29,000				X	X	X		
Lantana	A	A	B	\$ -0-								
Manalapan	A	A	A	\$ 1,400	X	X				X	X	
Palm Beach Cnty.	A	A	A	\$160,000	X	X	X	X		X	X	
Palm Springs	A	A	A	\$ 16,700	X					X		X
Riviera Beach	A	A	A	\$ 61,800	X	X		X		X		
Royal Palm Beach	A	A	A	\$ 16,200	X	X	X	X	X	X	X	
Seacoast	A	A	A	\$ 35,000	X	X	X					
Tequesta	A	A	A	\$ 46,800	X	X	X	X		X	X	
Village of Golf	A	A	B	\$ -0-								
West Palm Beach	A	A	A	\$270,000	X		X	X		X		
Totals				\$1,042,020	11	9	7	7	3	10	5	1
Question #1	A/17,	B/0										
Question #2	A/15,	B/2										
Question #3	A/12,	B/5,	C/0									

Appendix E/Table E-3
Broward County Standby Water Fees/User Fees - Annual Amount

<u>Agency Name</u>	<u>4"</u>	<u>6"</u>	<u>8"</u>	<u>10"</u>	<u>12"</u>
Broward County	\$ 65	\$ 65	\$ 65	\$ 65	\$ 65
Coconut Creek	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Cooper City	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Coral Springs	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Coral Sprgs. Im.	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Dania	\$ 120	\$ 144	\$ 240		
Davie	\$ 300	\$ 600	\$1,200		
Deerfield Beach	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Ferncrest	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Fort Lauderdale	\$ 195	\$ 587	\$ 979	\$1,772	\$2,745
Hallandale	\$ 125	\$ 175	\$ 275		
Hillsboro Beach	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Hollywood	\$ 120	\$ 241	\$ 241	\$ 361	
Lauderhill	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Margate	\$ 300	\$ 700	\$1,200		
Miramar	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
North Lauderdale	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
North Springs	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Oakland Park	\$ 78	\$ 102	\$ 126	\$ 150	\$ 174
Parkland	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Pembroke Pines	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Plantation	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Pompano Beach	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Sunrise	\$ 300	\$ 600	\$1,200	\$2,400	
Tamarac	\$ 432	\$ 865	\$1,555		
Wilton Manors	\$ 200	\$ 200	\$ 200	\$ 200	\$ 200
Totals	\$2,235	\$4,279	\$7,281	\$4,948	\$3,184

Appendix E/Table E-4
Palm Beach County Standby Water Fees/User Fees - Annual Amount

<u>Agency Name</u>	<u>4"</u>	<u>6"</u>	<u>8"</u>	<u>10"</u>	<u>12"</u>
Acme	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Boca Raton	\$ 197	\$ 444	\$ 790	\$1,234	
Boynton Beach	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Delray Beach	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Highland Beach	\$240*	\$240*	\$240*		
Jupiter	\$1,231	\$2,412	\$3,842	\$5,508	\$10,283
Lake Worth	\$ 171	\$ 360	\$ 636	\$ 984	\$ 984
Lantana	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
Manalapan		\$ 144	\$ 192		
Palm Beach Cnty.	\$ 300	\$ 600	\$ 960		
Palm Springs	\$ 328	\$ 741	\$1,324	\$2,066	\$3,317
Riviera Beach	\$ 118	\$ 172	\$ 367	\$ 661	
Royal Palm Beach	\$ 264	\$ 444	\$ 672	\$1,044	
Seacoast	\$ 141	\$ 141	\$ 141	\$ 141	
Tequesta	\$300+	\$720+	\$1,200+	\$1,680+	
Village of Golf	\$ -0-	\$ -0-	\$ -0-	\$ -0-	\$ -0-
West Palm Beach	\$ 266	\$ 532	\$ 852	\$1,224	
Totals	\$3,556	\$6,950	\$11,216	\$14,542	\$14,584

* Minimum fee for one riser.

+ Plus the cost of water used.

Appendix E/Section E-5
Calculations - Standby Water Fees/User Fees

Calculation #1

Broward County Rates

4"	\$ 2,235/11=	\$ 203
6"	\$ 4,279/11=	\$ 389
8"	\$ 7,281/11=	\$ 662
10"	\$ 4,948/6=	\$ 825
12"	\$ 3,184/4=	\$ 796

Calculation #2

Palm Beach County Rates:

4"	\$ 3,556/11=	\$ 323
6"	\$ 6,950/12=	\$ 579
8"	\$11,216/12=	\$ 935
10"	\$ 14,542/9=	\$1,616
12"	\$ 14,584/3=	\$ 4,861

Calculation #3

Combined County Rates:

4"	\$ 5,791/22=	\$ 263
6"	\$11,229/23=	\$ 488
8"	\$18,497/23=	\$ 804
10"	\$19,490/15=	\$1,299
12"	\$ 17,768/7=	\$2,538

Calculation #4

Comparison of Palm Beach County versus Broward County Rates for 4-, 6-, and 8-inch connections (see Table 1 page 179):

County	4"	6"	8"	Totals
Palm Beach	\$ 323 +	\$ 579 +	\$ 935 =	\$ 1,837
Broward	\$ 203 +	\$ 389 +	\$ 662 =	\$ 1,254

$$\text{\$ 1,837} - \text{\$ 1,254} = \text{\$ 583} / \text{\$ 1,254} = 46.5\%$$

Palm Beach County standby water fees/user fees for 4-, 6-, and 8-inch connections are 46.5 percent higher on average than Broward County.

Calculation #5

Comparison of Jupiter, Florida, fees versus combined county average rates:

Area	4"	6"	8"	10"	12"	Totals
Jupiter	\$1,231 +	\$2,412 +	\$3,842 +	\$5,508 +	\$10,283 =	\$23,276
Combine d	\$ 263 +	\$ 488 +	\$ 804 +	\$1,299 +	\$ 2,538 =	\$ 5,392

$$\text{\$ 23,276} - \text{\$ 5,392} = \text{\$ 17,884} / \text{\$ 5,392} = 331.7\%$$

Jupiter, Florida, standby water fees/user fees for 4-, 6-, 8-, 10-, and 12-inch connections are 331.7 percent higher on average than the combined rates of Broward County and Palm Beach County.

Calculation #6

Comparison of Boca Raton, Florida, fees versus combined county average rates:

Area	4"	6"	8"	10"	Totals
Boca Raton	\$ 197 +	\$ 444 +	\$ 790 +	\$1,234 +	\$ 2,665
Combined	\$ 263 +	\$ 488+	\$ 804 +	\$1,299 +	\$ 2,854

$$\$2,854 - \$2,665 = \$189 / \$2854 = 6.6\%$$

Boca Raton, Florida, standby water fees/user fees for 4-, 6-, 8-, and 10-inch connections are 6.6 percent lower on average than the combined rates of Broward County and Palm Beach County.

Appendix E/Table E-6

Ranking of Broward County and Palm Beach County Standby Water Fees/User Fees for six-inch Connections on an annual basis (highest to lowest, alphabetical where the fee is the same). Note: "5E" and "5F" are standby water fee services; "5E" - "Estimate for water that could be used if the building caught fire." "5F" - "Charges to maintain fire flow capability for the entire system." An "X" indicates the service is included in the fee.

#	Agency Name	Fee	5E	5F
1	Jupiter	\$ 2,412	X	X
2	Tamarac	\$ 865		
3	Palm Springs	\$ 741		X
4	Tequesta	\$ 720		X
5	Margate	\$ 700	X	
6	Davie	\$ 600		X
7	Palm Beach County	\$ 600		X
8	Sunrise	\$ 600		
9	Ft. Lauderdale	\$ 587	X	X
10	West Palm Beach	\$ 532		X
11	Boca Raton	\$ 444		X
12	Royal Palm Beach	\$ 444	X	X
13	Lake Worth	\$ 360	X	X
14	Hollywood	\$ 241		
15	Highland Beach	\$ 240		
16	Wilton Manors	\$ 200	X	X
17	Hallandale	\$ 175	X	X
18	Riviera Beach	\$ 172		X
19	Dania	\$ 144		X
20	Manalapan	\$ 144		X
21	Seacoast	\$ 141		
22	Oakland Park	\$ 102		
23	Broward County	\$ 65		
24	Acme	\$ -0-		
25	Boynton Beach	\$ -0-		
26	Coconut Beach	\$ -0-		
27	Cooper City	\$ -0-		
28	Coral Springs	\$ -0-		

#	Agency Name	Fee	5E	5F
29	Coral Springs Im	\$ -0-		
30	Deerfield Beach	\$ -0-		
31	Delray Beach	\$ -0-		
32	Ferncrest	\$ -0-		
33	Hillsboro Beach	\$ -0-		
34	Lantana	\$ -0-		
35	Lauderhill	\$ -0-		
36	Miramar	\$ -0-		
37	North Lauderdale	\$ -0-		
38	North Springs	\$ -0-		
39	Parkland	\$ -0-		
40	Pembroke Pines	\$ -0-		
41	Plantation	\$ -0-		
42	Pompano Beach	\$ -0-		
43	Village of Golf	\$ -0-		